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The description of an unusual hunting kit considered to be of Southern Bushman origin

by

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SYNOPSIS

A Bushman hunting kit (MM 649) comprising bow, quiver and 21 arrows, in the Campbell Collections of the University of Natal, which is believed to be of Southern Bushman origin, is described, illustrated and compared with a unique Bushman hunting kit in the Natal Museum, which was found in a rock shelter in the Mhlwasini valley, Drakensberg, Natal, in 1926. Similarities to other Southern Bushman material in the South African Museum are also noted. The characteristic features of the Southern Bushman material are briefly compared with the Northern Bushman equipment in order to emphasize the likely provenance of the kit in the Campbell Collections.

INTRODUCTION

A gift of a quiver, bow and 21 arrows was presented to the late Dr Killie Campbell in 1954. Unfortunately there is no record of the identity of the donor, or where the hunting equipment was obtained, although it was catalogued as being of Bushman origin. For twenty years this hunting kit lay undisturbed in the Campbell Collections in the Killie Campbell Africana Library. It was not until the visit of Dr Tim Maggs and Mr Martin Hall of the Natal Museum, Pietermaritzburg, that any particular importance was attached to it, and it was due to them that the significance of this most interesting item was realized.

It was the unusual characteristics of the arrows and the construction of the quiver that attracted attention, especially because of the striking similarity to a unique Bushman hunting kit in the Natal Museum (NM 2528) (Figs 2 and 3), which was found in 1926 in the Eland Cave in the Cathkin Park area of the Natal Drakensberg by Mr J. S. Lombard, and which, except for a few arrows, was the only known example of a hunting kit from the Bushmen of the Drakensberg. The hunting kit in the Natal Museum consists of a bow, leather bow-case, wooden quiver containing 19 arrows, poison spatula, and sundry metal blades (Vinnicombe 1971).

Although the lack of evidence in the records of the Killie Campbell Africana Library regarding the hunting equipment makes it impossible to draw any final conclusions regarding its origin, the close similarity of this equipment and that of the Natal Museum suggests a Drakensberg origin for the Campbell material. A search for further comparable equipment revealed a quiver and arrows in the South African Museum, Cape Town (SAM 362, SAM 2173), which were made by the Southern Bushmen. These items are not associated with each other but represent items from more than one hunting kit. The arrows were presented to the Museum in 1890 by A. de Smit, and were said to have been collected in the Graaff-Reinet area in 1820. The quiver was presented to the Museum in 1903 by J. M. Bain. Although Bain collected in the Cape, the precise locality in which the quiver was found is not

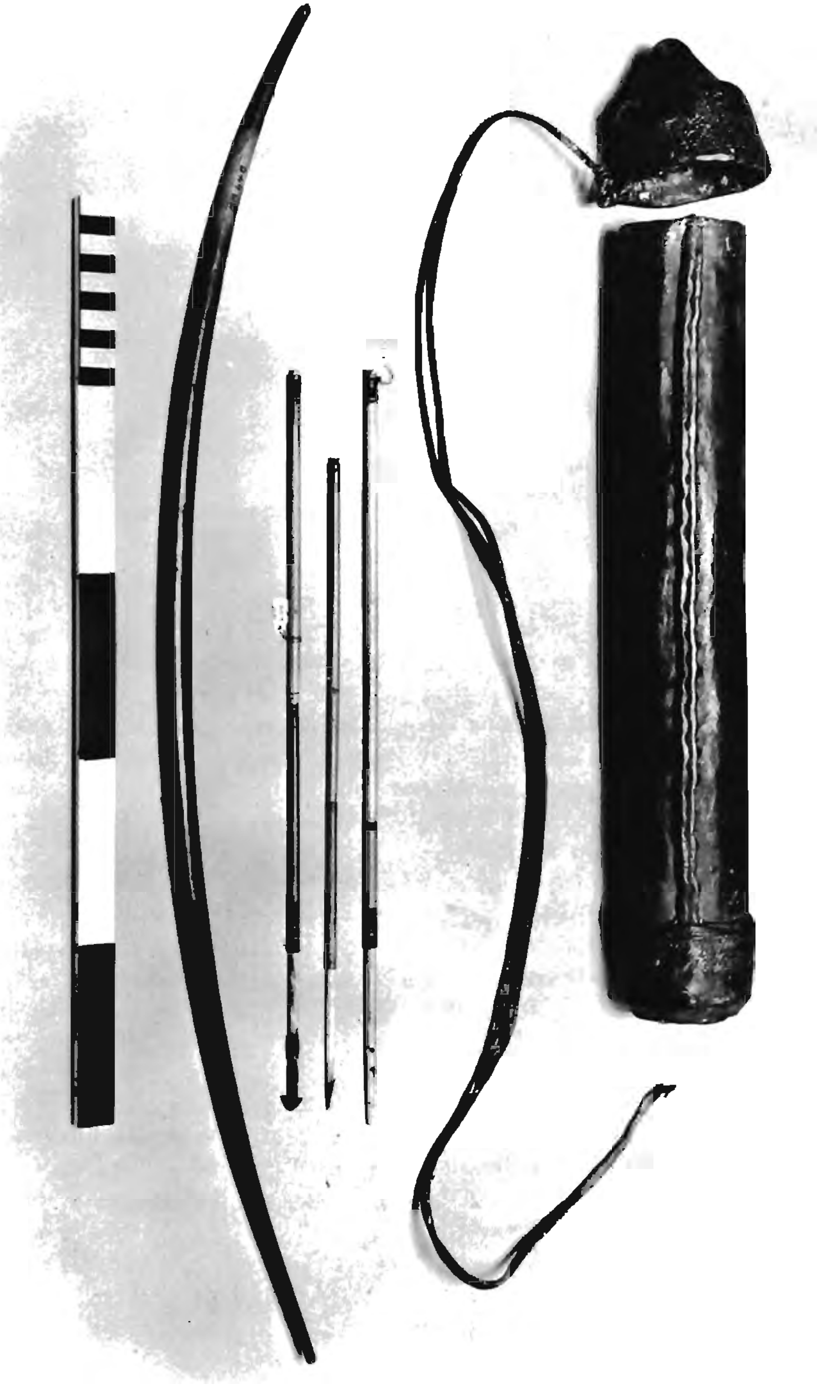

Fig. 1. Bushman hunting kit (Campbell Collections).
Scale 50 cm long.

known. Besides comparing this kit with the specimens in the South African and Natal Museums, it will be very briefly compared with hunting equipment more recently manufactured by Kalahari Bushmen.

Comparison with the items in the collections of both the Natal and South African Museums suggests that the equipment in the Campbell Collections was made by the Southern Bushmen, but the evidence is insufficient to point to a specific area such as the Natal Drakensberg or the eastern Cape. However, it is appropriate that this hunting kit be researched and documented as far as possible, as it is well preserved and demonstrates admirably the delicate craft of arrow-making among the Southern Bushmen. It is only such chance finds as the hunting kit found in the Cathkin Park area now in the Natal Museum and the kit in the Campbell Collections that remain to tell us anything of their material culture—hence the significance of the kit in the Campbell Collections, which, although its precise provenance is unknown, has added to our meagre record of the ethnology of the Southern Bushman.

DESCRIPTION OF THE HUNTING KIT

Quiver (Fig. 1, Table 1)

The quiver in the Campbell Collections is cylindrical and made from hard, tough hide. The hide was probably shaped by moulding it round a solid core while still wet (Vinnicombe 1971: 617). The hide is folded lengthwise and sewn up one side in run-and-fell stitching with a cord made from threads of animal sinew. The thong used to stitch the quiver was pulled fairly tightly so that the outer edges of the seam have a wavy appearance. Five centimetres below the mouth of the quiver, the imprints of the cord which bound the wet hide round the mould can be seen. A band of binding was probably also secured here to hold one end of the thong carrying-strap in place, the other end being fastened to the detachable top or covering cap.

The quiver in the Natal Museum (Fig. 2) is wooden with hide caps on either end. However, the unusual bow-case is constructed in a similar way to the quiver in the Campbell Collections, being made of tough hide sewn up one side with run-and-fell stitching which is pulled tightly, giving the edges of the seam the same wavy appearance. The quiver in the South African Museum has similar features to the quiver in the Campbell Collections and is made of tough hide sewn up one side with thong run-and-fell stitching.

The hide used to make the body of the quiver in the Campbell Collections is 3–4 mm thick, while that used for the caps varies from 2 to 5 mm in thickness. The top or covering cap is the most distinctive feature of this quiver. It is 10 cm in diameter. The dome is conical in shape, and the cone formation is approximately 5 cm in length. The thong carrying-strap attaching the cap to the quiver is knotted through a hole punched in a small protuberance on the rim of the cap, 1,7 cm wide, 1,3 cm long and 5 mm thick. The carrying-strap is 103 cm long and is made from a stout piece of thong about 5 mm wide split down the middle for a length of 56 cm. The external binding which probably secured the other end of the thong carrying-strap to the body of the quiver is missing.

The quiver appears to be covered with some sort of resin. The bow-case in the Natal Museum is also covered with resin. Vinnicombe (1971: 617) suggests that the resin has a waterproofing function and that some form of protection would be needed to prevent the bowstring from becoming slack in high-rainfall areas. The presence of resin on the quiver in the Campbell Collections therefore suggests that this hunting kit may have come from an area like the Drakensberg where high rainfall is experienced.

TABLE 1

Comparison of the Quivers in the Campbell Collections, Natal Museum and South African Museum respectively.

Feature	*Campbell Collections* Fig. 1	*Natal Museum* Fig. 2	*South African Museum*
Total length (cm) . . .	54,5	42,5	46,4
Length without top covering cap (cm)	46,8	39,0	45,6
Height of top covering cap (cm)	10,0	4,0	5,0
Diameter of top covering cap (cm)	8,5	7,0	7,6
Material	hide	wood with hide caps	hide
Shape of top covering cap	conical	rounded	rounded
Cord imprints	on body and both caps	on both caps	no evidence
Resin on quiver . . .	on body and both caps	on both caps	no evidence
Carrying-strap	thong attached to top covering cap and body	broken thong attached to top covering cap	thong attached to both caps

Arrows (Figs 1, 3, Table 2)

The arrows provide the most detailed points of similarity. Two arrows in the Campbell Collections are identical to two in the Natal Museum kit. The structure of the arrows in both kits is similar and includes examples of both simple and composite structure. A single example of a typical composite arrow from the South African Museum has been described for comparative purposes and has many similar characteristics.

Of the 21 arrows in the Campbell Collections kit 14 are simple arrows with bone tips, 4 are composite (2 have lost their tips and 2 have iron tips), and 3 are incomplete composite arrows which have lost their fore-shafts and iron tips. Although there are only 19 arrows in the Natal Museum kit, it has been assumed from the available records that there were originally 21 when the equipment was found (Vinnicombe 1971: 621).

The 14 simple arrows consist of reed shafts with simple bone tips (mean: 9,4 cm long). Each of the 4 composite arrows are made up of a reed shaft, a bone link-shaft, a bone fore-shaft, a grass collar (which secures the 2 bone shafts) and a triangular iron tip (preserved on 2 of the arrows) secured in a slot at the end of the fore-shaft.

The 3 incomplete composite arrows consist of reed shaft and bone link-shaft. It is evident from examining them that the blunt, round ends of these link-shafts were once inserted into a grass tube collar which would have held the link-shafts and the bone fore-shafts together. The ends of these link-shafts have a smaller diameter than the rest of the link-shaft and the bone is whiter 4 mm from the end.

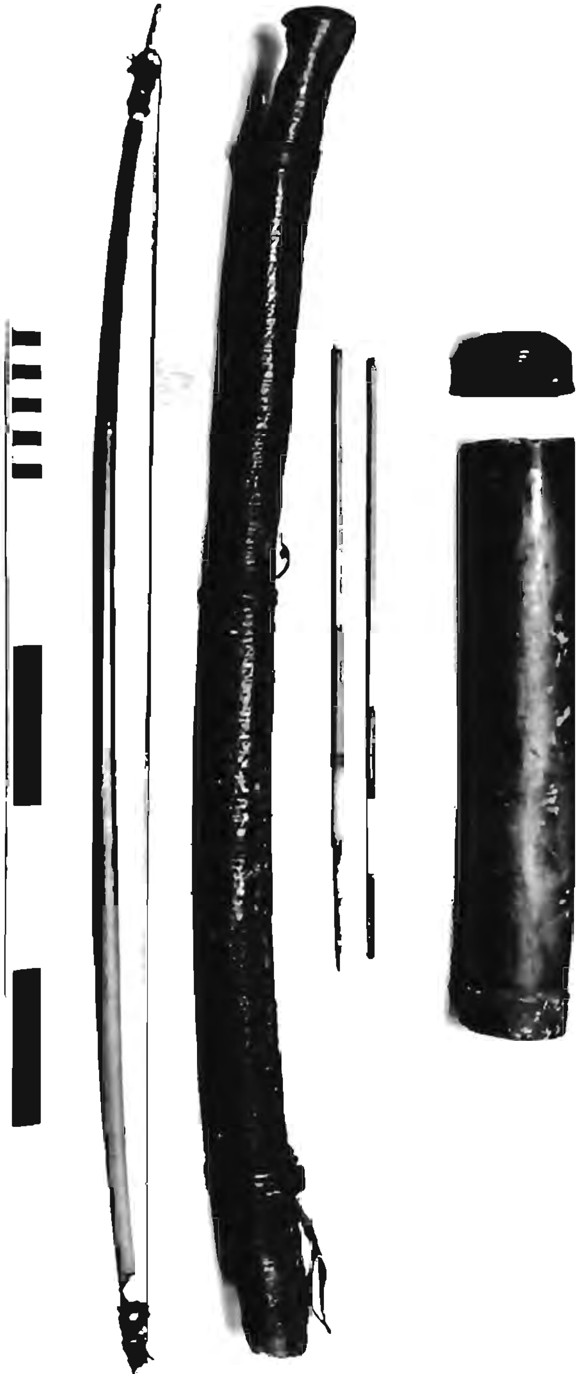

Fig. 2. Bushman hunting kit (Natal Museum).
Scale 50 cm long.

Most of the bone link-shafts have the same fine striations round the circumference as seen in the arrows in the Natal Museum kit. The arrows in the South African Museum show no evidence of striations. Only one of the composite arrows in the Campbell Collections shows evidence of a design cut into the bone link-shaft. It consists of a small cross-hatched incision approximately 5 mm long, just above where the bone shaft enters the reed shaft. The Ethnology Department of the South African Museum suggests that this may be an ownership mark. Fear of damaging the arrows has made it impossible to ascertain if the arrow-heads are reversible.

The arrows in all three collections have a reinforcing sinew binding at the top of the grass shaft where the link-shaft enters the culm and at the node at the end of the grass shaft just below where the V- or U-shaped nock is cut to receive the bow-string. The grass tube joining the link and fore-shafts is also reinforced with sinew binding.

The culms are cut just short of the node so that the bone points or bone link-shafts can easily be inserted into the culm without obstruction. The V- or U-shaped nock is cut just below a node which acts as a strengthening agent. Without this node, the grass shaft would probably split from the pressure of the bow-string when the arrow was being launched. The arrows in the Natal and South African Museums also possess shafts made from the culms of reeds which are similarly cut.

Five of the arrows (1 simple and 4 composite) in the Campbell Collections have barbs, apparently made from splinters of porcupine quill. The barb on the simple

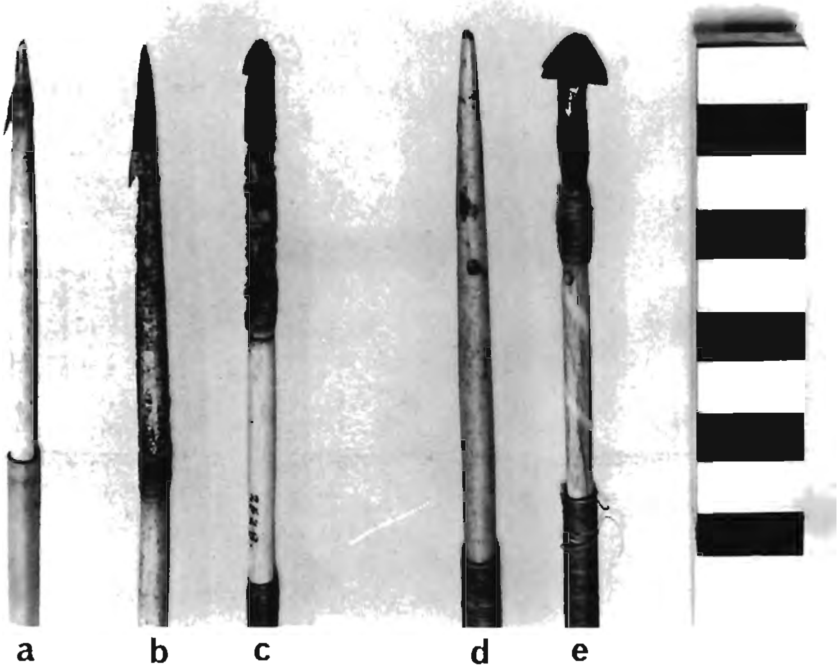

Fig. 3. Arrow-heads. a. simple barbed, b. simple barbed (encrusted with poison), c. composite barbed (encrusted with poison), d. simple, e. composite. Scale 10 cm. (a, d, e, —Campbell Collections, b, c, —Natal Museum)

arrow is bound with a fine thread of sinew 8 mm from the tip. Except in the case of one of the composite arrows, the simple barb lies in the same plane as the slot cnt to admit the iron head. The position of the barbs on these arrows is the same as on the arrows in the Natal Museum and South African Museum collections, i.e. '. . . set at an angle to the flattened surface of the bone which lies parallel with the plane of the metal head' (Vinnicombe 1971: 621).

The iron tips which fit into small slots cut across the top of the fore-shaft are simple and triangular in shape. One iron tip is complete while the other is bent and broken off at one side. The undamaged iron tip is 7 mm wide and it would appear that the other was originally of a similar width. The complete arrow-tip is 6 mm long while the damaged one is 5 mm long.

The balancing point of the arrows in the Campbell Collections, both simple and composite, is behind the junction of the bone link-shaft and the reed shaft in the upper quarter of the reed shaft.

All the arrows in the Campbell Collections, except those which are incomplete, have poison deposits encrusting the fore-shafts (composite arrows), or the upper half of the bone tips (simple arrows). The poison appears to have been mixed with very short pieces of animal hair. The encrusted poison is not as thick on these arrows as on those in the Natal and South African Museums. However, this may be the result of frequent handling.

Samples of the poison from the arrows in both the Natal Museum and Campbell kits were chemically analysed. As far as could be ascertained the two samples were similar but the analysis proved inconclusive—especially in regard to the presence of poison in both samples. Professor D. Taylor of the Department of Chemistry, University of Natal, Durban, wrote in his report: 'From my examination, your poisons consist mainly of a plant resin, almost certainly from a *Euphorbia*. I can't find any *Aloe* resin; I haven't much experience of these but I would have expected to find them if they were present as they are quite different from *Euphorbia* resins.' 'I can't find any poison in any of the samples. I am pretty sure there is not a heart poison of the usual type, there are sensitive tests for these and I should have been able to find even quite small amounts.' He adds: 'Since they [the samples] seem so similar it may well mean they have the same origin, but there is no convincing evidence of this.' Although there is the possibility that one of the constituents of the samples is snake venom, this was not identified in the tests.

The arrows described in this paper have been compared with three other arrows in the Campbell Collections (MM 159 a, b, c) which come from the Kalahari Bushmen. These arrows are composite in structure, made of reed, iron and wood and bound with sinew. They each consist of a reed shaft, a wooden link-shaft, a grass collar and an iron arrow-head.

The arrow-heads (comprising iron tang and tip), are on average 8 cm in length. The tips are tapering and triangular (approximately 2 cm long and 1,5 cm wide) and the tangs are long and thin and are inserted into the grass collar.

The link-shafts are made of wood and more heavily constructed than the fine bone link-shafts already described. At one end the wooden link-shaft enters the reed shaft and is bound at this point with a reinforcing sinew. The other end of the link-shaft is joined to the arrow-head by means of a reed collar. This collar, which secures the tang and the link-shaft, is reinforced with sinew binding which extends up the length of the tang.

The manner in which the culm of the reed used for the shaft is cut, the position of the U-shaped nock just below a node, as well as the position of the sinew bindings (i.e. just above the nock, where the link-shaft enters the reed shaft and over the grass collar) are all features which are similar to those found in the Southern Bushman arrows. Two of the Northern Bushman arrows have no internode between the top of the reed shaft and the nock.

In general, despite the many similarities in construction, the Kalahari Bushman arrows are heavier and more robust than those of the Southern Bushmen. Iron is relied upon for the construction of the arrow and the structure of the arrow-head differs greatly in that the point is much larger in the Kalahari example and the long tang is altogether absent in the Southern arrows described.

The Northern Bushman arrows are associated with a simple quiver made from a piece of extremely soft and pliable hide. It is folded lengthwise and sewn round the bottom and up the side with fine overstitching. The carrying-strap is made of two pieces of tightly twisted thong. The total length of the quiver is 49 cm and the diameter of the opening is 16,5 cm. This particular quiver is small, pliant and of very simple design. Of course, larger quivers of more complex construction, mostly made of wood and hide, are common among the Kalahari Bushmen.

TABLE 2

Some general features of the arrows in the three museum collections

Feature	*Campbell Collections* Figs 1, 3	*Natal Museum* Figs 2, 3	*South African Museum* (single example)	*Kalahari Bushman*
Design of arrows .	simple and composite	simple and composite	composite	composite
Arrow-head . . .	bone tips (simple) iron tips (composite)	bone tips (simple) iron tips (composite)	iron tip	iron tip and tang
Material used for link- and fore-shaft .	bone	bone	bone	wood link-shaft (no fore-shaft)
Collar	grass tube	grass tube	grass tube	grass tube
Reed shaft . . .	possibly made from *Phragmites australis*	possibly made from *Cymbopogen validus*	unknown	unknown
Number of internodes on shaft	one between nock and bone shaft	one between nock and bone shaft	one between nock and bone shaft	one (one arrow only)
Binding	bound with sinew at the point where bone shaft enters reed shaft; at the node just above the nock; round the grass tube joining link- and fore-shafts.	bound with sinew at the point where bone shaft enters reed shaft; at the node just above the nock; round the grass tube joining link- and fore-shafts.	bound with sinew at the point where bone shaft enters reed shaft; at the node just above the nock; round the grass tube joining link- and fore-shafts.	bound with sinew at the point where bone shaft enters reed shaft; at the node just above the nock; round the grass tube joining link- and fore-shafts.
Poison	thinly encrusted, black, mixed with pieces of animal hair	thickly encrusted, black, crumbling	thickly encrusted, black, crumbling	small deposit on tang
Striations . . .	evidence of fine striations round bone shafts and/or bone tips	evidence of fine striations round bone shafts and/or bone tips	no striations	no striations
Total length (cm—mean)	41,0	40,0	51,0	42,8
Length of reed shaft (cm—mean) . . .	32,1	29,0	39,0	27,3

Bow (Fig 1, Table 3)

The bow in the Campbell Collections is small and made of fine-grained wood. Unfortunately the bow-string is missing. It is shorter and more curved than the example in the Natal Museum. It is highly patinated except for a length of 6,5 cm approximately 8 cm from the end and it is likely that the stave had a binding at this place. Half-way between where the binding might have been and the end of the stave is a clear imprint encircling the stave, at which point the bow-string was probably fastened. It is interesting to note that the bow in the Natal Museum has an untwisted sinew binding at one end near the bow-string attachment.

At its widest the stave, which is rounded in cross-section, is 1,5 cm. At the tapering ends the diameter is 0,5 cm. The diameters at the widest and narrowest points of the stave of the bow in the Natal Museum are almost identical.

It is interesting to note what Stow (1905: 68) says in regard to the type of bow which was most commonly used by the Bushmen of the Stormberg, the Orange Free State and the Caledon River. He states that these people 'used short bows, while the tribes north of the Vaal (Gij Gariep) and to the westward used bows of a much longer kind. Anyone unaccustomed to the use of weapons of the former description was unable to draw them to their full strength.'

TABLE 3

Comparison of the Campbell Collections and Natal Museum Bushman bows

Feature	*Campbell Collections* Fig. 1	*Natal Museum* Fig. 2
Total length (cm)	76,5	89,0
Width at widest (cm) . . .	1,5	1,5
Width at narrowest (mm) . .	5	4
Wood used	unable to identify	probably *Vepris lanceolata*
String	missing	2 mm thick cord made from 4 threads of individually rolled animal sinew

DISCUSSION

It is not possible to state conclusively from where the kit in the Campbell Collections came. The evidence strongly suggests, however, that it could have come either from the now extinct Southern Bushmen of the Drakensberg or the eastern Cape, especially if one considers the close similarities to the hunting kit in the Natal Museum and the comparable items in the South African Museum.

Stow (1905: 80) described and illustrated arrows collected mostly in the Cape and Orange Free State, which closely resemble those described here. Schapera (1930: 128–130) illustrated 2 arrows (Plate ix a and e) which appear to be very similar to those described in this paper. Unfortunately he does not give their origin.

It appears, therefore, from comparison with the well-documented specimens in the Natal and South African Museums, from the records of Stow and Schapera and from comparison with equipment from the Northern Bushmen of the Kalahari that the hunting kit in the Campbell Collections is of the Southern Bushman type and is possibly very old. This equipment resembles most closely the kit in the Natal Museum which is known to have come from the Bushmen of the Drakensberg. The remarkable similarities between these two kits are illustrated in Tables 1 and 2 and in the accompanying plates.

The arrows bear the closest similarities in that they are constructed from the same materials and have similar dimensions. The barbs and iron tips are identical and are attached to the bone fore-shaft in the same way. The manner of binding the sinew at the nock, collar and juncture where the bone shaft enters the reed shaft, is the same. The only difference is that in the Natal Museum kit there are basically three arrow designs, i.e. simple arrows (with bone link-shaft and an iron tip), composite arrows (with an iron tip) and composite arrows with a bone tip. There are only two designs in the kit in the Campbell Collections, i.e. simple arrows (with a bone tip) and composite arrows (with an iron tip).

The quivers are dissimilar in that the one in the Campbell Collections is made of hide and the one in the Natal Museum is made of wood and hide. The quiver in the Campbell Collections is similar to the bow-case in the Natal Museum, however, in that both are made from tough resin-covered hide which was probably shaped round a solid mould. Imprints of the cord which bound the hide round the mould are evident in both and both are sewn with run-and-fell stitching. The quiver in the Campbell Collections has a shaped conical covering cap which is a feature distinctive to it alone.

The bow in the Campbell Collections is small and sturdy and the fact that the Southern Bushmen used very short and sturdy bows is one indication of the probable origin of this piece of equipment.

There have been no previous attempts to draw an ethnological distinction between the Southern Bushmen and the Kalahari Bushmen, on the basis of hunting equipment. The similarities between the Natal Drakensberg, Graaff-Reinet and Campbell Collections items and their difference from typical Kalahari material show that there is a distinct possibility—if not a virtual certainty—that this differentiation can be made. It is indeed unfortunate that although there are numerous historical references to the Southern Bushmen, and many hundreds of their paintings still remain in rock shelters and caves, virtually nothing of their ethnology is preserved.

ACKNOWLEDGEMENTS

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REFERENCES

LOGIE, A. C., 1935. Preliminary notes on some Bushmen arrows from South-West Africa. *S.A. J. Sci.* **32**: 553–559.

PAGER, H., 1971. *Ndedema; a documentation of the rock painting of the gorge.* Graz: Akademische Drück-u, Verlagsanstait.

SCHAPERA, I., 1927. Bows and arrows of the Bushmen. *Man* **72**: 113–117.

——— 1930. *The Khoisan peoples of South Africa.* London: Routledge and Kegan Paul Ltd.

STOW, G. W., 1905. *The native races of South Africa.* London: Swan, Sonnenschein and Co. Ltd.

VINNICOMBE, P., 1971. A Bushman hùnting kit from the Natal Drakensberg. *Ann. Natal Mus.* **20**(3): 611–625.

WELLS, L. H., 1933. The archaeology of Cathkin Park. *Bantu Stud.* **7**(2): 113–129.